OM-252 052D 2013−05

Classic Series Welding Helmets

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SECTION 1 − WELDING HELMET SAFETY PRECAUTIONS − READ BEFORE USING

helmet 2012−02

Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

1-1. Symbol Usage

DANGER! − Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

NOTICE *− Indicates statements not related to personal injury.*

☞ *Indicates special instructions.*

This group of symbols means Warning! Watch Out! ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

1-2. Arc Welding Hazards

Only qualified persons should install, operate, maintain, and repair this unit.

ARC RAYS can burn eyes and skin.

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

- Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards). Refer to Lens Shade Selection table in Section 1-4.
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash, glare, and sparks; warn others not to watch the arc.
- Wear protective clothing made from durable, flame-resistant material (leather, heavy cotton, and wool) and foot protection.
- Before welding, adjust the auto-darkening lens sensitivity setting to meet the application.
- Stop welding immediately if the auto-darkening lens does not darken when the arc is struck. See the Owner's Manual for more information.

WELDING HELMETS do not provide unlimited eye, ear, and face protection.

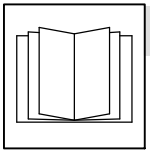
Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.

- Use impact resistant safety spectacles or goggles and ear protection at all times when using this welding helmet.
- Do not use this helmet while working with or around explosives or corrosive liquids.
- Do not weld in the overhead position while using this helmet.
- Inspect the auto-lens frequently. Immediately replace any scratched, cracked, or pitted cover lenses or auto-lenses.

NOISE can damage hearing.

Noise from some processes or equipment can damage hearing.

- Wear approved ear protection if noise level is high.



READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.
- Use only genuine replacement parts from the manufacturer.
- Perform maintenance and service according to the Owner's Manuals, industry standards, and national, state, and local codes.

FUMES AND GASES can be hazardous.

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- Keep your head out of the fumes. Do not breathe the fumes.
- If inside, ventilate the area and/or use local forced ventilation at the arc to remove welding fumes and gases.
- If ventilation is poor, wear an approved air-supplied respirator.
- Read and understand the Material Safety Data Sheets (MSDSs) and the manufacturer's instructions for metals, consumables, coatings, cleaners, and degreasers.
- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watchperson nearby. Welding fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
- Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.

1-3. Proposition 65 Warnings

Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects, or other reproductive harm. *Wash hands after use.*

1-4. Lens Shade Selection Table

Process	Electrode Size in. (mm)	Arc Current in Amperes	Minimum Protective Shade No.	Suggested Shade No. (Comfort)*
Shielded Metal Arc Welding (SMAW)	Less than 3/32 (2.4) 3/32−5/32 (2.4−4.0) 5/32−1/4 (4.0−6.4) More than 1/4 (6.4)	Less than 60 60−160 160−250 250−550	7 8 10 11	–– 10 12 14
Gas Metal Arc Welding (GMAW) Flux Cored Arc Welding (FCAW)		Less than 60 60−160 160−250 250−500	7 10 10 10	–– 11 12 14
Gas Tungsten Arc Welding (TIG)		Less than 50 50−150 150−500	8 8 10	10 12 14
Air Carbon Arc Cutting (CAC-A)	Light Heavy	Less than 500 500−1000	10 11	12 14
Plasma Arc Cutting (PAC)		Less than 20 20−40 40−60 60−80 80−300 300−400 400−800	4 5 6 8 8 9 10	4 5 6 8 9 12 14
Plasma Arc Welding (PAW)		Less than 20 20−100 100−400 400−800	6 8 10 11	6−8 10 12 14

Reference: ANSI Z49.1:2005

* Start with a shade that is too dark to see the weld zone. Then, go to a lighter shade which gives a sufficient view of the weld zone without going below the minimum.

1-5. Principal Safety Standards

Safety in Welding, Cutting, and Allied Processes, ANSI Standard Z49.1, is available as a free download from the American Welding Society at http://www.aws.org or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: www.global.ihs.com).

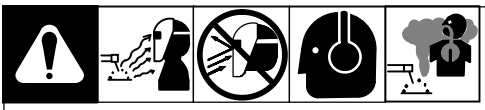
Safe Practice For Occupational And Educational Eye And Face Protection, ANSI Standard Z87.1, from American National Standards Institute, 25 West 43rd Street, New York, NY 10036 (phone: 212-642-4900, website: www.ansi.org).

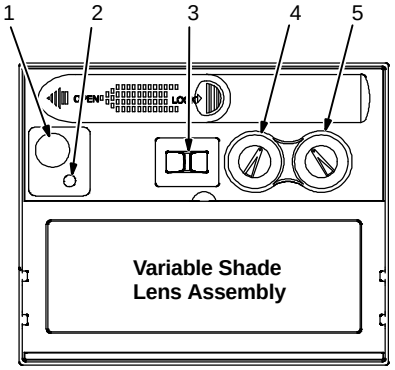
SECTION 2 − SPECIFICATIONS

Specification	Variable Shade Helmet	VSi Helmet	Standard Fixed Shade No. 10 Helmet	Fixed Shade 2 x 4 No. 10 Flip-Up Helmet
Viewing Field	95 x 34 mm (3.75 x 1.375 in.)	95 x 40 mm (3.75 x 1.57 in.)	95 x 35 mm (3.75 x 1.375 in.)	
Reaction Time	0.0001 sec (1/10,000)	0.00015 sec (1/15,000)	0.000277 sec (1/3,600)	
Available Shades	Darkened State: No. 8 − No. 12 Light State: No. 3 Provides Continuous UV And IR Protection	Darkened State: No. 8 − No. 13 Light State: No. 3 Provides Continuous UV And IR Protection	Darkened State: No. 10 Light State: No. 3 Provides Continuous UV And IR Protection	
Sensitivity Control	Adjusts For Varying Ambient Light And Welding Arc	Adjusts For Varying Ambient Light And Welding Arc; X-Mode	Not Applicable	
Delay Control	Slows Lens Dark-To-Light State (Slow − Fast)	Slows Lens Dark-To-Light State (Between 0.1 And 1 Second)	Not Applicable	
Automatic Power Off	Shuts Lens Off 15−20 Minutes After Last Arc Is Struck			
Low Battery Indicator	Red Led Light Illuminates To Indicate 2−3 Days Remaining Battery Life		Not Applicable	
Power Supply	AAA Alkaline Batteries Only (Two)	CR2450 Lithium Battery (Miller Part No. 217043)	Rechargeable, Non-Replaceable Solar Cell	
Sensors	Independent/ Redundant (Two)	Independent/ Redundant (Three)	Independent/ Redundant (Two)	
Operating Temperature	14°F to 131°F / −10°C to +55°C ☞ *When stored in extremely cold temperatures, warm helmet to ambient temperature before welding.*			
Storage Temperature	−4°F to 158°F / −20°C to +70°C ☞ *When stored in extremely cold temperatures, warm helmet to ambient temperature before welding.*			
Total Weight	453.6g (16oz.)	640.2g (22.58oz.)	453.6g (16 oz.)	396g (13.96oz.)
Standards	ANSI Z87.1+(2010) and CSA			
Warranty	2 Years From Date Of Purchase (See Section 11)			

SECTION 3 − OPERATING INSTRUCTIONS

3-1. Helmet Controls





☞ *Four different lens assemblies are shown. Refer to the illustration that matches the lens on your helmet.*

Variable Shade Helmet

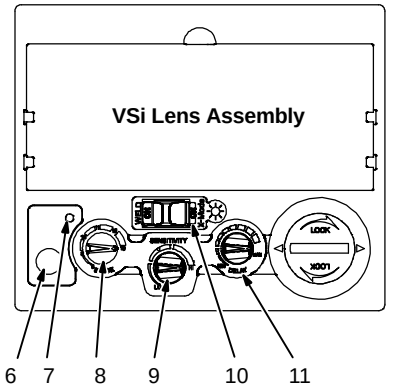
1 Reset Button (See Section 3-2)

2 Low Battery Indicator (See Section 3-2)

3 Lens Delay Control (See Section 3-4)

4 Variable Shade Control (No. 8 − 12) (See Section 3-5)

5 Sensitivity Control (See Section 3-6)



VSi Helmet

6 Reset Button (See Section 3-2)

7 Low Battery Indicator (See Section 3-2)

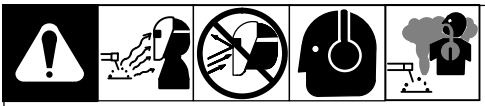
8 Variable Shade Control (No. 8 − 13) (See Section 3-5)

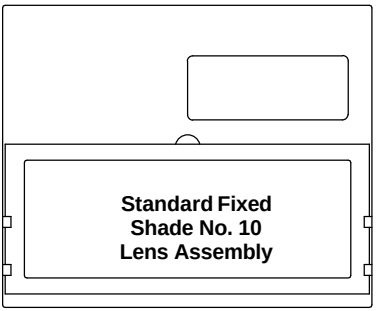
9 Sensitivity Control (See Section 3-6)

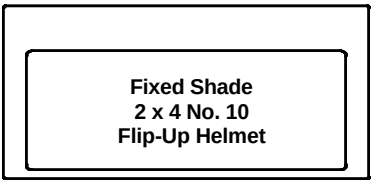
10 Mode Control (See Section 3-3)

11 Lens Delay Control (See Section 3-4)

3-1. Helmet Controls − Continued







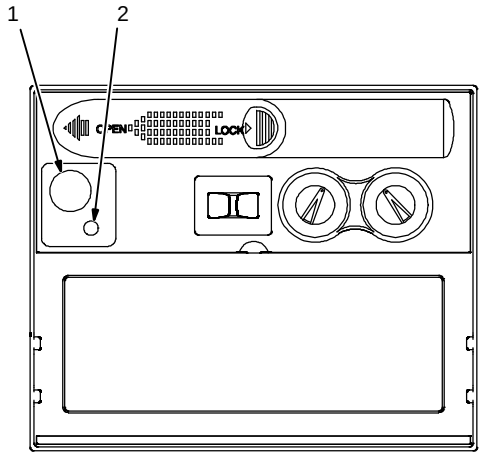
Fixed Shade No. 10 Helmets

The fixed shade models have no buttons or controls. The lens turns on (darkens) automatically when welding begins and turns off when welding stops.

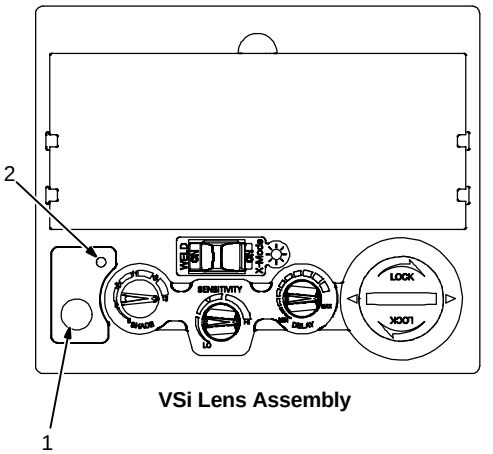
☞ *Always make sure the lens is fully charged before welding. Place helmet in direct sunlight for 20 minutes to charge the lens assembly solar cell.*

Notes

3-2. Reset Button And Low Battery Indicator



Variable Shade Lens Assembly



VSi Lens Assembly

☞ *The auto-darkening lens turns on (darkens) automatically when welding begins and turns off when welding stops.*

1 Reset Button

Press Reset button to check if the lens is working properly.

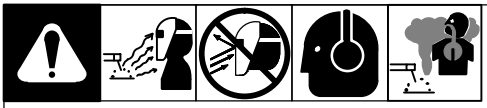
When the Reset button is pressed, the lens should darken twice and return to the clear state. Do not use the helmet if the lens does not function as described. (See Section 9, Troubleshooting.)

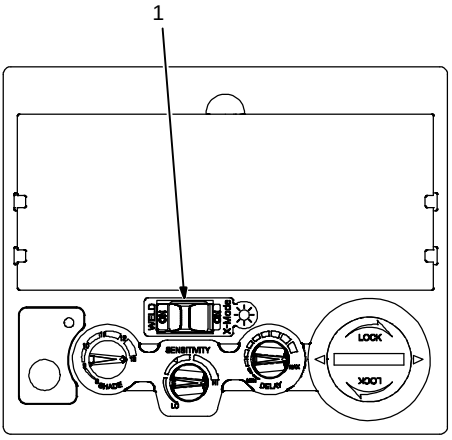
2 Low Battery Indicator

The low battery indicator lights when 2−3 days of battery life remain.

If battery power is low, install new AAA Alkaline batteries (Variable Shade helmet) or CR2450 Lithium battery (VSi helmet) (see Section 6).

3-3. Mode Control (VSi Helmet Only)





1 Mode Control Button

Slide Mode Control switch to select the mode appropriate for the work activity.

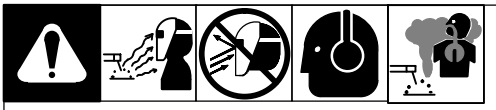
☞ *Slide switch away from the desired mode (Weld or X-Mode). When the switch is moved, "On" is revealed next to the active mode.*

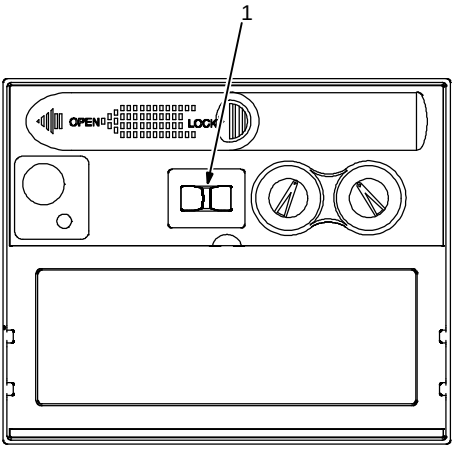
Weld Mode − used for most welding applications. In this mode the lens turns on when it optically senses a welding arc. Adjust shade, sensitivity, and delay settings as needed.

X-Mode − used for outdoor or low current welding applications. In this mode the lens turns on when it senses weld current. Adjust shade, sensitivity, and delay settings as needed.

☞ *Nearby welding may affect helmet operation when lens is in X-Mode. Stay at least 12 ft (3.7 m) away from other welding activity.*

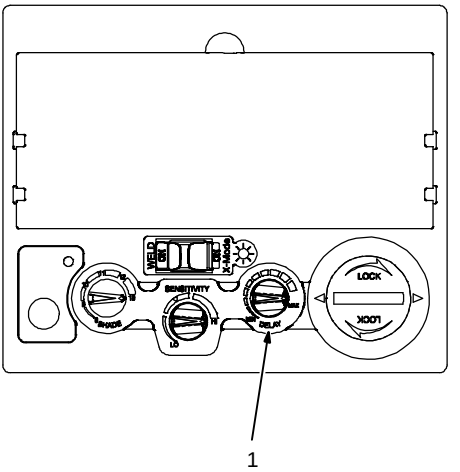
3-4. Lens Delay Control





Variable Shade Lens Assembly

VSi Lens Assembly



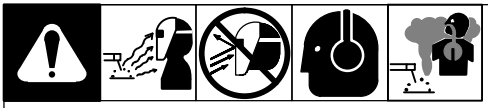
1 Lens Delay Control

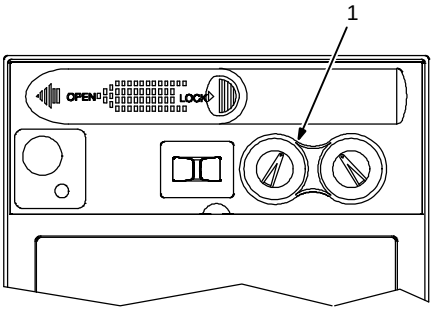
The lens delay control is used to adjust the time for the lens to switch to the clear state after welding.

The delay is particularly useful in eliminating bright after-rays present in higher amperage applications where the molten puddle remains bright momentarily after welding.

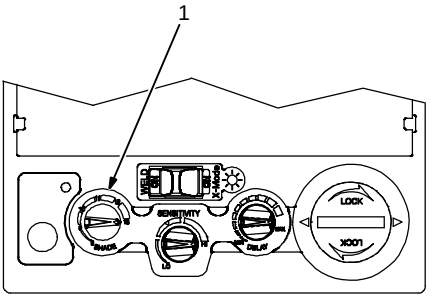
Variable Shade helmet adjusts from Slow to Fast and VSi helmet adjusts from Min to Max (0.1 to 1.0 second).

3-5. Variable Shade Control





Variable Shade Lens Assembly



VSi Lens Assembly

1 Variable Shade Control

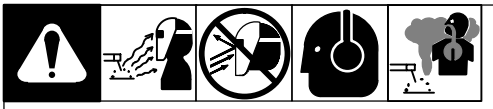
Lens shade can be adjusted from No. 8 − 12 on Variable Shade helmet, and from No. 8 − 13 on VSi helmet.

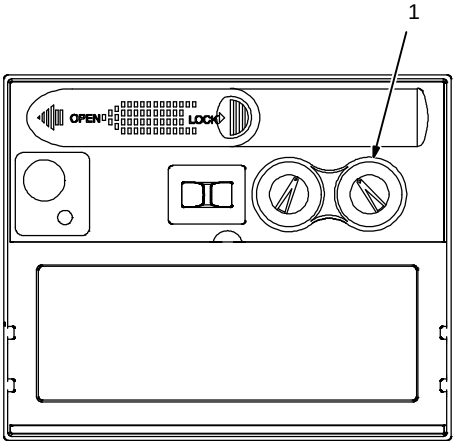
Use the control to adjust the lens shade in the darkened state. Use the table below to select proper shade control setting based on your welding process.

Start at darkest shade and adjust lighter to suit the welding application and your personal preference.

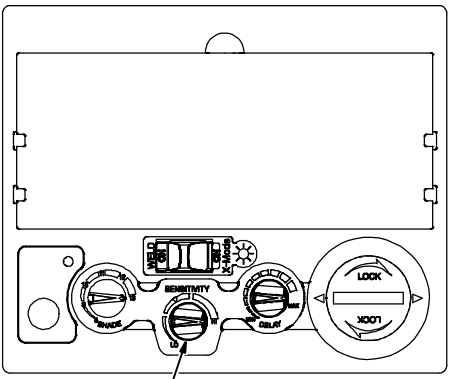
Application Welding	Arc Current in Amperes	Protective Shade No.
Stick Electrodes	Less than 40 40−80 80−175 175−300 300−500	9 10 11 12 13
MIG	Less than 100 100−175 175−300 300−500	10 11 12 13
Gas Tungsten Arc Welding (TIG)	Less than 50 50−100 100−200 200−400	10 11 12 13
Air Carbon	Less than 500 500−700	12 13
Plasma Arc Cutting	60−150 150−250 250−400	11 12 13
Plasma Arc Welding	Less than 50 50−200 200−400	9 10 12

3-6. Sensitivity Control





Variable Shade Lens Assembly



VSi Lens Assembly

1 Sensitivity Control

Use control to make the lens more responsive to different light levels in various welding processes. **Use a Mid-Range or 30−50% sensitivity setting for most applications.**

It may be necessary to adjust helmet sensitivity to accommodate different lighting conditions or if lens is flashing On and Off. Adjust helmet sensitivity as follows:

☞ *Adjust helmet sensitivity in lighting conditions helmet will be used in.*

- Turn sensitivity control to lowest setting.
- Press On button to turn helmet On. Helmet lens will darken twice and then clear.
- Face the helmet in the direction of use, exposing it to the surrounding light conditions.
- Gradually turn sensitivity setting clockwise until the lens darkens, then turn sensitivity control counterclockwise until slightly past setting where lens clears. Helmet is ready for use. Slight readjustment may be necessary for certain applications or if lens is flashing on and off.

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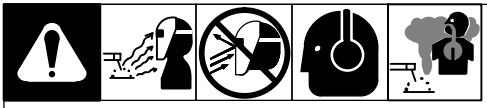
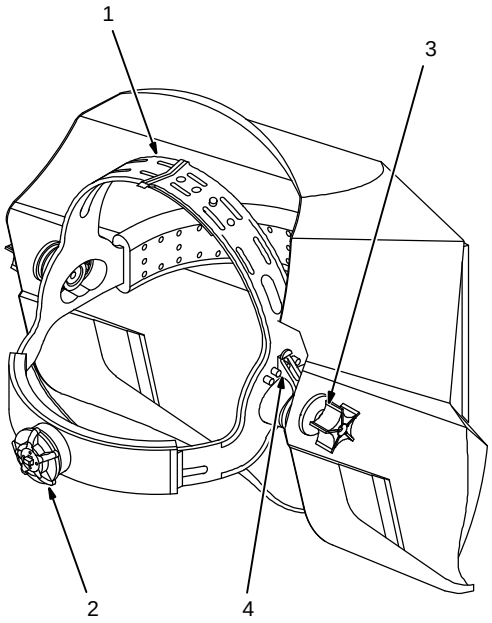
Recommended Sensitivity Settings	
Stick Electrode	Mid-Range
Short Circuiting (MIG)	Low/Mid-Range
Pulsed & Spray (MIG)	Mid-Range
Gas Tungsten Arc (TIG)	Mid/High-Range
Plasma Arc Cutting/Welding	Low/Mid-Range

SECTION 4 − ADJUSTING HEADGEAR





☞ *There are four headgear adjustments: headgear top, tightness, distance adjustment, and angle adjustment.*

1 Headgear Top Adjustment

Adjusts headgear for proper depth on the head to ensure correct balance and stability.

2 Headgear Tightness Adjustment

Adjusts headgear for a secure fit. To adjust, push in the adjusting knob located on the back of the headgear. Turn knob left or right to obtain desired tightness.

☞ *If adjustment is limited, it may be necessary to remove the comfort cushion.*

3 Distance Adjustment

Adjusts the distance between the face and the lens. To adjust, loosen both outside tension knobs and press inward to free from adjustment slots. Move forward or back to desired position and retighten. (Both sides must be equally positioned for proper vision.)

4 Angle Adjustment

Four pins on the right side of the headband top provide adjustment for the forward tilt of the helmet. To adjust, loosen the right outside tension adjustment knob then lift on the control arm tab and move it to the desired position. Retighten tension adjustment knob.

☞ *When using the back distance adjustment position, only the back three angle adjustment pins can be used.*

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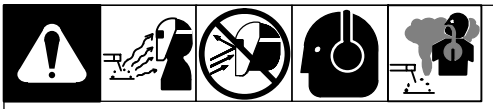
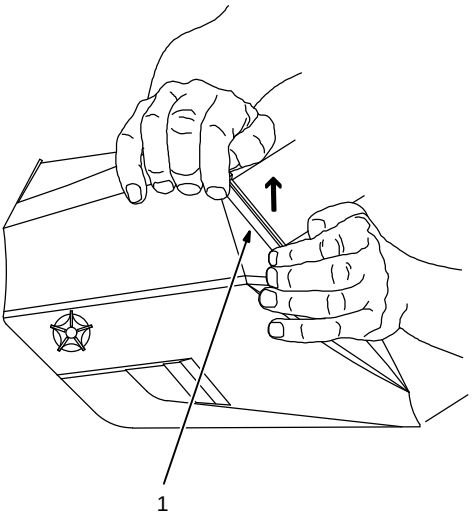
SECTION 5 − REPLACING THE LENS COVERS

5-1. Replacing Outside Lens Cover On Variable Shade And Standard Fixed Shade Helmets



Never use the auto-darkening lens without the inside and outside lens covers properly installed. Welding spatter will damage the auto-darkening lens and void the warranty.

☞ *See Section 5-5 for information on replacing lens covers and grinding shield on Fixed Shade Flip-Up Helmets.*



1 Outside Lens Cover Frame

2 Lens Cover

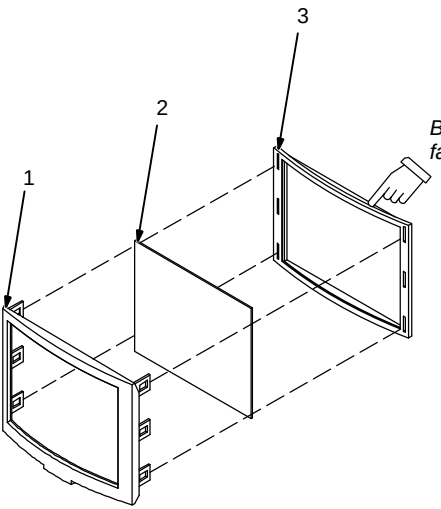
3 Gasket

Remove lens cover frame by grasping the outside corners and pulling the frame away from the helmet.

Remove lens cover and gasket from the six-prong lens frame. Replace lens cover and reinstall gasket and lens in frame. Reinstall frame in helmet.

☞ *Be sure the flat side of lens gasket faces the six-prong lens frame.*

☞ *Be sure all six prongs of lens frame are securely fastened in slots in helmet.*



Be sure flat side of gasket faces lens frame.

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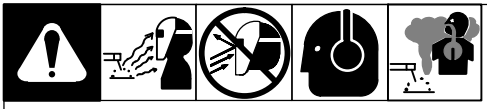
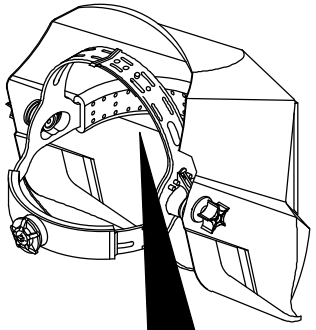
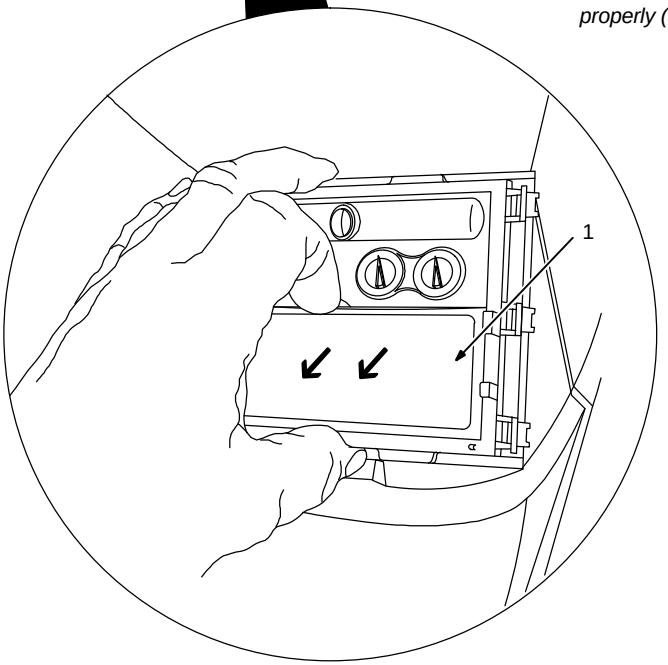
5-2. Replacing Inside Lens Cover On Variable Shade and Standard Fixed Shade Helmets







Never use the auto-darkening lens without the inside and outside lens covers properly installed. Welding spatter will damage the auto-darkening lens and void the warranty.

☞ *See Section 5-5 for information on replacing lens covers and grinding shield on Fixed Shade Flip-Up Helmets.*

1 inside Lens Cover

Remove the inside lens cover by prying the lens up at the thumbnail opening located at the top center of the lens cover.

Replace the lens cover by gently bowing it in the center and inserting it, one end at a time, into the retaining clips located on the outside of the auto-darkening lens assembly.

☞ *Be sure the cover lens is seated properly (flat) to prevent fogging.*

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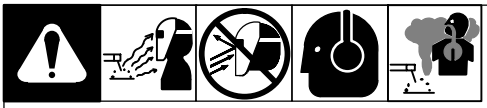
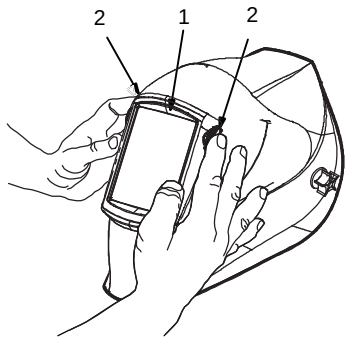
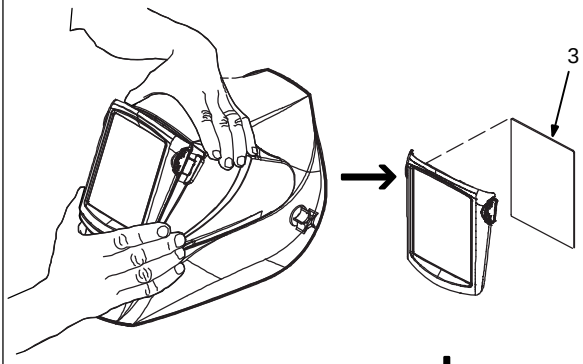
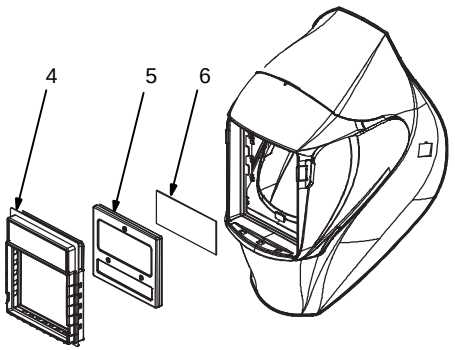
5-3. Replacing Lens Covers On VSi Helmet









Never use the auto-darkening lens without the inside and outside lens covers properly installed. Welding spatter will damage the auto-darkening lens and void the warranty.

Outside Lens Cover

1 Lens Holder

2 Release Points

3 Outside Lens Cover

Remove lens holder by pressing release points and pulling the holder away from the helmet.

Remove lens cover from holder. Replace lens cover in lens holder. Reinstall lens holder in helmet.

Inside Lens Cover

4 Gasket

5 Lens

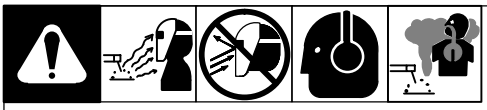
6 Inside Lens Cover

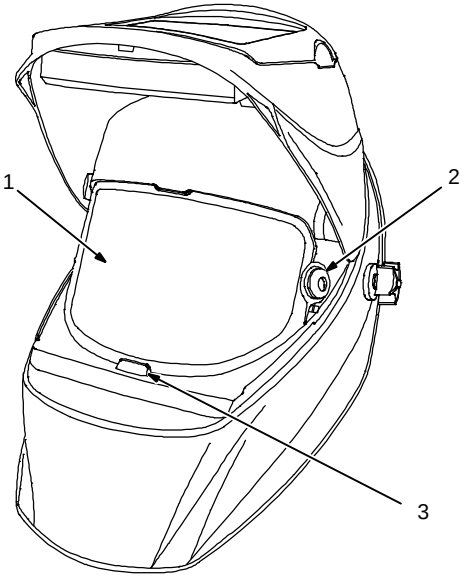
Remove the inside lens cover by prying cover from groove in gasket.

Replace the lens cover by gently bowing it in the center and inserting it, one end at a time, into the gasket.

☞ *Be sure the cover lens is seated properly (flat) to prevent fogging.*

5-4. Replacing Grinding Shield On VSi Helmet





Never use the auto-darkening lens without the inside and outside lens covers properly installed. Welding spatter will damage the auto-darkening lens and void the warranty.

1 Grinding Shield

2 Retaining Clip

3 Tab

Rotate both retaining clips to the Open position.

Gently push shield toward bottom tab and remove shield from helmet.

Remove retaining clips from shield. Install clips in same location on new shield. (Retaining clips are not interchangeable.)

Install new shield in helmet and rotate clips to the Lock position.

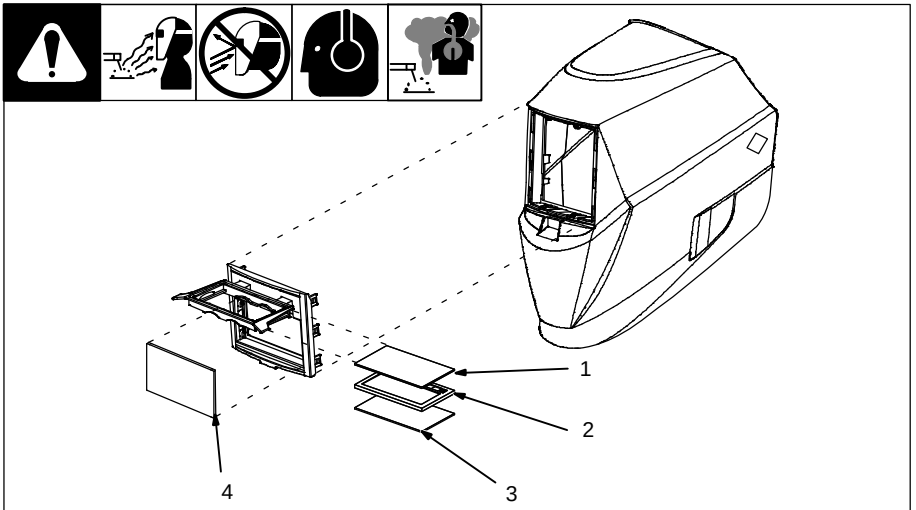
Tear-Away Protective Sheets

Tear-away sheets are available to prolong the life of the griding shield (see Parts List).

To install tear-away sheets, pull backing from both sides of the tear-away, remove white adhesive backing strips, and place on clear shield.

Ref. 804 109

5-5. Replacing Lens Covers And Grinding Shield On Fixed Shade Flip-Up Helmets



Never use the auto-darkening lens without the inside and outside lens covers properly installed. Welding spatter will damage the auto-darkening lens and void the warranty.

☞ *See Sections 5-1 and 5-2 for lens cover replacement information on standard Fixed Shade Helmets.*

1 Outside Lens Cover

2 Lens

3 Inside Lens Cover

Lift flip-up frame and slide lens and covers together out of the open side of the frame. Replace lens covers. Slide lens and covers together back into frame.

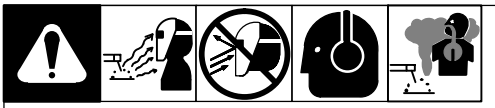
4 Grinding Shield

Remove grinding shield from front of helmet by pushing shield from the inside. Reinstall shield by placing one edge of shield in track. Using both hands, bend shield outward until the loose end of the shield can be installed in the open track.

Notes

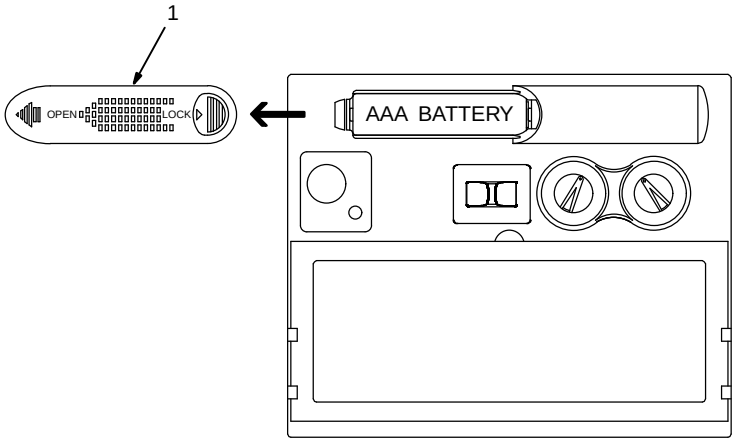
SECTION 6 − REPLACING THE BATTERY

6-1. Replacing Battery On Variable Shade Helmets



1 Battery Cover

Slide cover to left and remove batteries. Install two AAA alkaline batteries and replace cover.



6-2. Replacing Battery On VSi Helmet

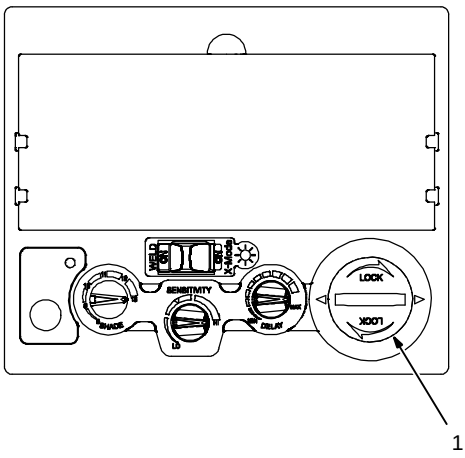
1 Battery Cover

Insert a coin into the slot on the battery cover. Rotate cover counterclockwise to remove battery.

Install CR2450 lithium battery or equivalent (Miller Part No. 217043).

☞ *Be sure Positive (+) side of the battery faces up (toward inside of helmet).*

To reinstall battery cover, position cover with arrows at 6 and 12 o'clock positions, then turn cap 1/4 turn clockwise.



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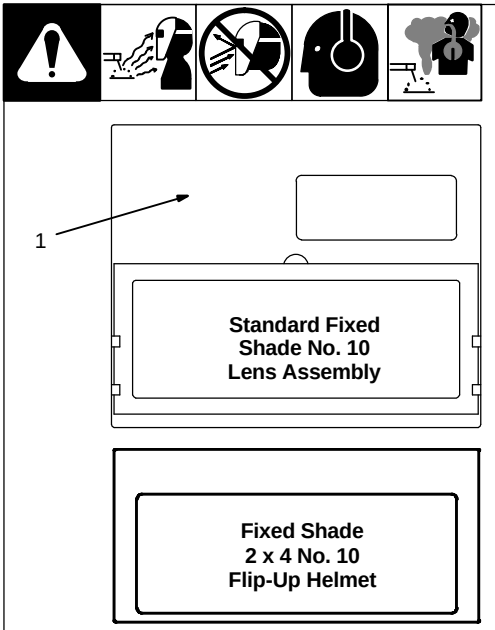
6-3. Solar Cell On Fixed Shade Helmets

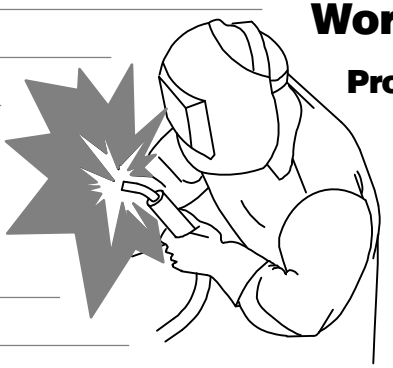


1 Solar Cell (Internal)

Fixed shade models are powered by a rechargeable, non-replaceable solar cell. No service is required.

☞ *Always make sure the lens is fully charged before welding. Place helmet in direct sunlight for 20 minutes to charge lens solar cell.*

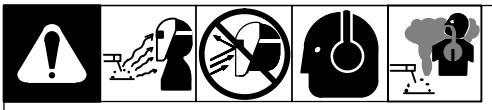
Notes

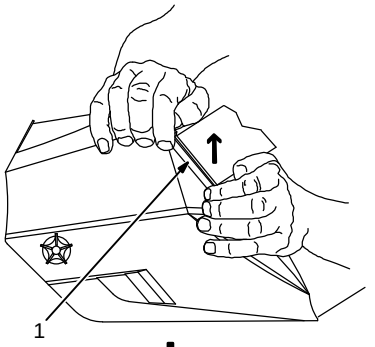


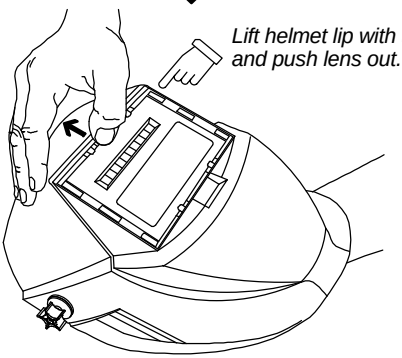
Work like a Pro!

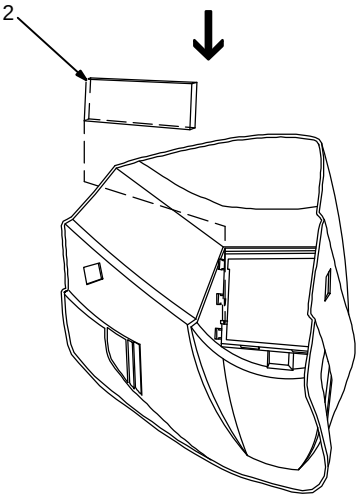
Pros weld and cut safely. Read the safety rules at the beginning of this manual.

SECTION 7 − INSTALLING OPTIONAL MAGNIFYING LENS









1 Outside Lens Cover Frame

2 Optional Magnifying Lens

Remove lens cover frame by grasping the outside corners and pulling the frame away from the helmet.

Remove the auto-darkening lens assembly by gently lifting the helmet lip above the assembly and pushing assembly free of the retaining brackets.

Starting at the top, slide magnifying lens into the helmet retaining brackets. Position the lens tightly against the bottom holding pins.

Reinstall auto-darkening lens assembly and lens cover frame.

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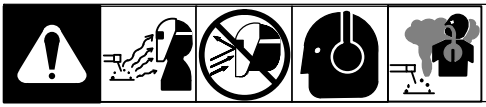
SECTION 8 − MAINTENANCE

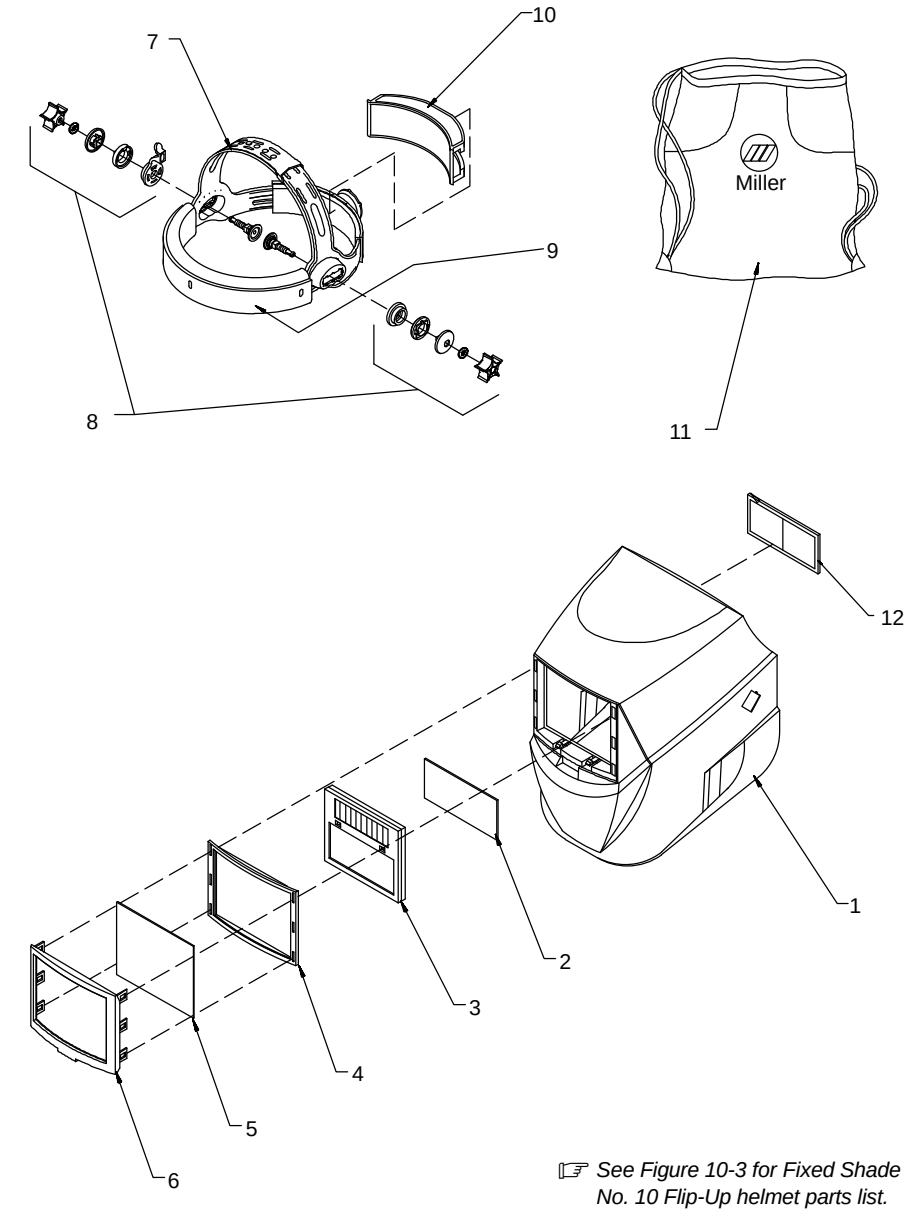
☞ *Never use solvents or abrasive cleaning detergents. Do not immerse the lens assembly in water.*

The helmet requires little maintenance. However, for best performance clean after each use. Using a soft cloth dampened with a mild soap and water solution, wipe the cover lenses clean. Allow to air dry. Occasionally, the filter lens and sensors should be cleaned by gently wiping with a soft, dry cloth.

SECTION 9 − TROUBLESHOOTING



Trouble	Remedy
Auto lens not On; lens does not darken momentarily when the Reset button is pressed.	Check batteries and verify they are in good condition and installed properly. Also, check battery surfaces and contacts and clean if necessary.
Auto lens not switching; lens stays light and does not darken when welding.	Stop welding immediately. Press the Reset button on variable shade helmets. On fixed-shade helmets, make sure the lens solar cell is properly charged by placing the helmet in direct sunlight for 20 minutes. If power is on, review the sensitivity recommendations and adjust sensitivity. Clean lens cover and sensors of any obstructions. Make sure the sensors are facing the arc; angles of 45° or more may not allow the arc light to reach the sensors.
Auto lens not Switching; lens stays dark after the weld arc is extinguished, or the lens stays dark when no arc is present.	Fine-tune the sensitivity setting by making small adjustments to the control by turning it toward the “min” setting. In extreme light conditions, it may be necessary to reduce the surrounding light levels.
Sections of the auto-lens are not going dark; distinct lines separate the light and dark areas.	Stop welding immediately. The auto-lens may be cracked which can be caused by the impact of dropping the helmet. Weld spatter on the auto lens may also cause cracking. (The lens may need to be replaced; most cracked lenses are not covered by warranty).
Auto lens switching or flickering; lens darkens then lightens while the welding arc is present.	Review the sensitivity setting recommendations and increase the sensitivity if possible. Be sure the arc sensors are not being blocked from direct access to the arc light. Check the lens cover for dirt and spatter that may be blocking the arc sensors. Increasing Lens Delay to Fast position may also reduce switching.
Inconsistent or lighter auto-lens shading in the dark-state, noticeable on the outside edges and corners.	Referred to as an angle of view effect, auto-darkening lenses have an optimum viewing angle. The optimum viewing angle is perpendicular or 90° to the surface of the auto-lens. When that angle of view varies in the dark-state, welders may notice slightly lighter areas at the outside edges and the corners of the lens. This is normal and does not represent any health or safety hazard. This effect may also be more noticeable in applications where magnifying lenses are used.



☞ *See Figure 10-3 for Fixed Shade No. 10 Flip-Up helmet parts list.*

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Figure 10-1. Variable Shade And Standard Fixed Shade No. 10 Auto-Darkening Welding Helmets

Item No.	Part No.	Description	Quantity

Figure 10-1. Variable Shade And Standard Fixed Shade No. 10 Auto-Darkening Welding Helmets

☞ *See Figure 10-3 for Fixed Shade No. 10 Flip-Up helmet parts list.*

1	231415	Helmet Shell, Black	1
2	231410	Lens Cover, Inside (4.25 − 1.75 in.) (5 Per Pkg.)	1
3	251293	Auto-Darkening Lens Assy. (Variable Shade)	1
	231413	Cover, Battery (Variable Shade)	1
3	231571	Auto-Darkening Lens Assy. (Fixed Shade)	1
4	231412	Gasket, Front Lens	1
5	231411	Lens, Front Cover (4.5 x 3.6875 in) (5 Per Pkg.)	1
6	231572	Holder, Front Lens (Black)	1
7	770246	Ratchet Headgear Assy.	1
8	*770248	Adjustment Angle/Stop Hardware Kit	1
9	770249	Headband, Fabric	1
10	♦216336	Comfort Cushion, Foam Rubber	1
11	♦770250	Bag Helmet, Miller	1
	♦222003	Adapters, Hard Hat (Not Shown)	1
	♦260940	Adapters, Slotted Hard Hat (Not Shown)	1
12	♦212235	Lens, 0.75 Magnification	1
12	♦212236	Lens, 1.00 Magnification	1
12	♦212237	Lens, 1.25 Magnification	1
12	♦212238	Lens, 1.50 Magnification	1
12	♦212239	Lens, 1.75 Magnification	1
12	♦212240	Lens, 2.00 Magnification	1
12	♦212241	Lens, 2.25 Magnification	1
12	♦212242	Lens, 2.50 Magnification	1

* Adjustment Hardware Kit With O-rings.

♦ Optional

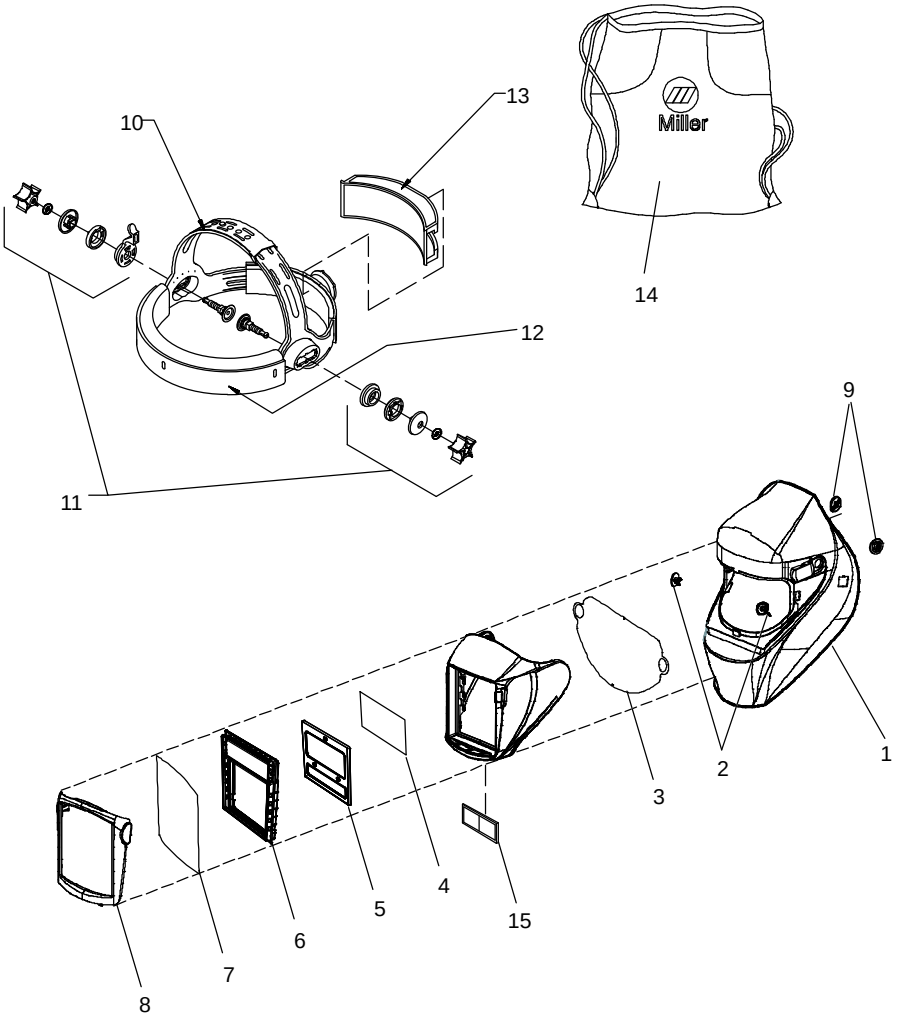

Figure 10-2. VSi Auto-Darkening Welding Helmet

Item No.	Part No.	Description	Quantity

Figure 10-2. VSi Auto-Darkening Welding Helmet

1	261824	Shell, Helmet − I Series (Black)	1
2	245819	Clip, Retaining Grinding Shield	2
3	245818	Lens, Grinding Shield (Clear)	1
	♦254278	Lens, Tear Away Grinding Shield (Clear)	1
4	231410	Lens Cover, Inside 4.25in x 1.75 in	1
5	261826	Lens Assembly, Auto−dark VSi	1
	217043	Battery, Lithium (CR2450)	2
6	261827	Gasket, Lens Assembly VSi (Qr)	1
7	235628	Lens Cover, Front 4.5 in x 5.25 in	1
8	261828	Lens Holder, Front − I Series (Black)	1
9	255070	Clips, Visor Hinge − I Series	2
10	770246	Headgear, Gray (Includes Items 11 And 12)	1
11	*770248	Kit, Adjustment Angle/Stop Hardware Kit	1
12	770249	Headband, Fabric	1
	079975	Replacement O-rings For Kit 770 248 (5 Per Pkg.)	1
13	♦216336	Cushion, Comfort (Foam Rubber)	1
14	♦770250	Bag, Helmet (Miller Logo)	1
	♦222003	Adapters, Hard Hat (Not Shown)	1
	♦260940	Adapters, Slotted Hard Hat (Not Shown)	1
15	♦212235	Lens, 0.75 Magnification	1
	♦212236	Lens, 1.00 Magnification	1
	♦212237	Lens, 1.25 Magnification	1
	♦212238	Lens, 1.50 Magnification	1
	♦212239	Lens, 1.75 Magnification	1
	♦212240	Lens, 2.00 Magnification	1
	♦212241	Lens, 2.25 Magnification	1
	♦212242	Lens, 2.50 Magnification	1

* Adjustment Hardware Kit With O-rings.

♦ Optional

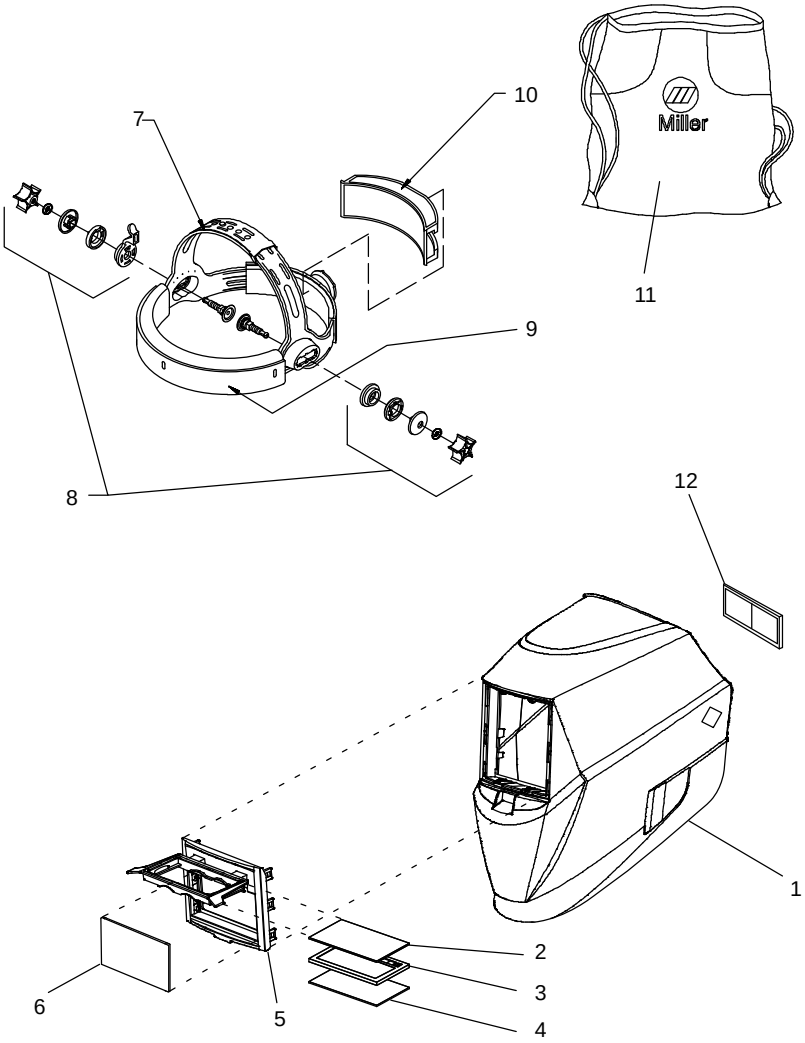

Figure 10-3. Fixed Shade No. 10 Flip-Up Welding Helmet

Item No.	Part No.	Description	Quantity

Figure 10-3. Fixed Shade No. 10 Flip-Up Welding Helmet

1	231415	Shell, Helmet (Black)	1
2	770237	Lens Cover, Inside 4.25 x 2 In. (5 Per Pkg.)	2
3	770226	Lens Assembly, 2 x 4 In. Fixed Shade No. 10	1
	♦770660	Lens Assembly, 2 x 4 In. Fixed Shade No. 8	1
	♦770659	Lens Assembly, 2 x 4 In. Fixed Shade No. 9	1
4	770237	Lens Cover, Outside 4.25 In. x 2 In.	1
5	261829	Frame, Lens Holding, Flip-Up	1
6	261830	Lens, Grinding Shield, Flip-Up (Clear)	1
7	770246	Headgear, Gray	1
8	*770248	Kit, Adjustment Angle/Stop Hardware Kit	1
	079975	Replacement O-rings For Kit 770 248 (5 Per Pkg.)	1
9	770249	Headband, Fabric	1
10	♦216336	Cushion, Comfort (Foam Rubber)	1
11	♦770250	Bag, Helmet (Miller Logo)	1
	♦222003	Adapters, Universal Hard Hat (Not Shown)	1
	♦260940	Adapters, Slotted Hard Hat (Not Shown)	1
12	♦212235	Lens, 0.75 Magnification	1
	♦212236	Lens, 1.00 Magnification	1
	♦212237	Lens, 1.25 Magnification	1
	♦212238	Lens, 1.50 Magnification	1
	♦212239	Lens, 1.75 Magnification	1
	♦212240	Lens, 2.00 Magnification	1
	♦212241	Lens, 2.25 Magnification	1
	♦212242	Lens, 2.50 Magnification	1

* Adjustment Hardware Kit With O-rings.

♦ Optional

SECTION 11 − LIMITED WARRANTY

LIMITED WARRANTY – Subject to the terms and conditions below. Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that the new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OR MERCHANTABILITY AND FITNESS.

Miller Classic auto-darkening lens helmets are warranted for 2 years from the date of purchase. *Proof of purchase is required for warranty transactions so it is imperative that a copy of the original invoice or sales receipt be retained.*

For warranty transactions, contact your Miller Distributor.

Effective January 1, 2013

Notes

Notes

Visit our website at
www.MillerWelds.com

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Appleton, WI 54914 USA

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